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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,848	04/14/2004	James Martin Gallas		5505

7590 03/22/2006  
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EXAMINER

GEORGE, PATRICIA ANN

ART UNIT PAPER NUMBER

1765

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/823,848

Applicant(s)

GALLAS ET AL.

Examiner

Patricia A. George

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

A typo is noted on page 6 line 5 of the specification. It appears that the applicant intended on using the word -- of—where “pf” is used. Appropriate correction is required.

### ***Claim Objections***

Claim1 and 3 are objected to because of the following informalities:

1. Claim 1 uses the term “the said” which is redundant. The word the or said may simply be deleted. Appropriate correction is required.
2. Claims 1 and 3, are missing a period at the end of the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. Regarding claim 1, and all claims directly or indirectly dependent on claim 1, the phrases "thin" and "sufficiently small" renders these claims indefinite. See MPEP § 2173.05(d). The terms "thin" and "sufficiently small" are relative terms, not defined by the claim. One of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The terms "thin" and "sufficiently small" may simply be deleted.
2. Claim 2 contains the trademark/trade name "CR39". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe diethyleneglycol bis-allylcarbonate and, accordingly, the identification/description is indefinite. The trademark name "CR39" may simply be replaced with --diethyleneglycol bis-allylcarbonate--.

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3. Regarding claims 1 and 5, and all claims directly or indirectly dependent on them, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Please remove the term "such as" from the claimed language of claims 1 and 5.
4. Claims 2-5 are indefinite because they directly or indirectly depend on indefinite claim 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welch et al. of USPN 6,602,603, in view of Gallas of USPN 5,047,447 and Blankenship in USPN 6,896,905.

Welch et al. discloses a method for tinting (col.9, l.5) (objects such as lens) via coating (col.9, l.6) an article or applying a coating composition to a substrate (col.9, l.6-7), of any composition, such as diethylene glycol bisallyl carbonate (col.10, l.6 – as in claim 2), preferably of a polymeric organic material (col.9, l.39-48 - as in claim 3); without causing cosmetic defects, e.g. pits, spots, cracks, or inclusions (col.2, l.27-29), at a desired hardness of 50-150 Newtons per mm<sup>2</sup> (col.24, l.18-20). Welch also discloses a treatment for cleaning (i.e. etching) and promoting adhesion (col.10, 3-5), with use of sodium hydroxide (col.10, l.15 – as in claim 4) prior to applying the tinted coating.

Several differences are note between the reference of Welsh and the applicants' invention. Welch et al. is silent as to the use of melanin. In addition, Welsh is silent with regards to the size of the pores after cleaning (i.e. etching) with sodium hydroxide.

Gallas teaches a method for preparing a melanin containing medium and for incorporating the melanin into a medium suitable for providing protection from radiation (such as lens) entails the preparation of a very thin film or sheet of plastic containing melanin (col.11, l.14-17), which demonstrates the claimed limitation a substrate that is functionalized so as to react and bond with the said melanin.

It would have been obvious to one of ordinary skill in the art at the time of invention was made, to modify the invention of tinting a polymeric substrate (such as lens) via coating, as Welch, to include melanin for providing protection from radiation, as Gallas, because Gallus teaches the specific use of melanin (i.e. with lens) is an

essential and distinguishing feature as the absorbing medium for radiation protection which is damaging to biological molecules and tissues.

The reference of Blankenship illustrates that the concept light scattering ability of a pore is directly related to its size. See col. 13, lines 32-42.

As a result, It would have been obvious to one of ordinary skill in the art at the time of invention was made, employing the process of Welsh to make sunglasses, to etch the substrate to achieve pore size small enough to preclude visible light scattering because the reference of Blankenship teaches that it is known that pore size effects the light scattering ability of a substance. One of ordinary skill desiring sunglasses would be motivated to select a pore size that precludes undesirable visible light scatter.

### ***Claim Rejections - 35 USC § 103***

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Welch et al. of USPN 6,602,603 and Gallas of USPN 5,047,447 (see discussion above), in further view of Abbott et al. of US 6,852,285.

The combined invention of Welch and Gallas are silent as to the use of a phase transfer catalyst.

Abbott et al. teaches interactions between molecules which are components of self-assembled monolayers (SAM) (see abstract). Abbott et al. teach irreversible, stable bonds to the surface of the substrate (col. 24, lines 50-65). Abbott teaches a useful recognition moiety, can control the properties of the SAM adjacent to the recognition moiety, such as hydrophobicity, hydrophilicity, surface-activity and the

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distance of the recognition moiety from the plane of the substrate and/or the SAM (col. 24, lines 50-65). Abbott teaches the hydrophilicity of the substrate surface can be enhanced by reaction with polar molecules such as amine-, hydroxyl- and polyhydroxyl-containing molecules (col. 25, lines 14-24). Abbott teaches representative hydrophobic moiety spacers include, but are not limited to hexanediamine, as in claim 5 (col. 25, lines 25-30). Abbott teaches the substrate surface can also be made surface-active by attaching to the substrate surface a spacer which has surfactant properties (col. 25, lines 30-35). Abbott teaches depending on the manner in which the SAM is assembled, the two components do not phase segregate into islands (col. 25-26, lines 62-8). Abbott teaches the accompaniment of a phase transfer catalyst, hexanediamine. Abbott teaches numerous combinations of recognition moiety and SAMs that are accessible to those of skill in the art (col. 26, line 20-...). Abbott teaches any catalyst can be added, (col. 38, lines 17-22), including hexanediamine, as in claim 5 (see col. 25, line 29).

It would have been obvious to one of ordinary skill in the art at the time of invention was made, to modify the invention of tinting a polymeric substrate by coating it with melanin for providing protection from radiation, as Welch and Gallus, to include hydrophobic moiety spacers such as hexanediamine, as Abbott, to the pretreatment because Abbott teaches phase segregation (i.e. phase shift), hydrophobicity, hydrophilicity, surface-activity and the distance of the recognition moiety from the plane of the substrate can be controlled and the surface can be enhanced by reaction.



***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: USPN 6,531,076.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patty A. George whose telephone number is (571)272-5955. The examiner can normally be reached on weekdays between 7:00am and 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571)272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patricia A George  
Examiner  
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11/05

NADINE G. NORTON  
SUPERVISORY PATENT EXAMINER

